CLAIMS

What is claimed is:

1. A reinforcing bar splice for joining reinforcing bars, the splice comprising:

a sleeve segment having longitudinal integral ribs deforming to conform to deformations on the reinforcing bars when the sleeve segment and the bars are relatively pressed together; and

a clamp operatively configured to relatively press the sleeve segment and the bars together.

2. The splice of claim 1, wherein the clamp is also configured to press relatively smooth portions of the bars into the ribs.

3. The splice of claim 1, wherein the ribs have rounded distal corners.

4. The splice of claim 1, wherein troughs between the ribs have proximal rounded corners.

5. The splice of claim 1, wherein the ribs are of substantially uniform width.

6. The splice of claim 1, wherein the ribs are enlarged at their distal ends.

7. The splice of claim 1, wherein the ribs are softer than the reinforcing bars.

8. The splice of claim 1, wherein the ribs are more malleable than the bars.

9. The splice of claim 1, wherein the ribs have a greater ductility than the bars.

10. The splice of claim 1, wherein the ribs have a radial height greater than their circumferential width.

ERICP0344US

11. The splice of claim 1, wherein the ribs are designed to deform upon the pressing.

12. The splice of claim 1,
wherein the clamp includes a sleeve surrounding the bars; and
wherein the sleeve segment is placed between the sleeve and the bar ends.

13. The splice of claim 12,
wherein the sleeve segment has a tapered outer surface; and
wherein the sleeve is a tapered collar having a tapered inner surface for engaging the tapered outer surface of the sleeve segment.

14. The splice of claim 13, wherein the sleeve segment includes multiple sleeve segment sections hingedly coupled together.

15. The splice of claim 14, wherein at least two of the sections have ribs on inner surfaces thereof.

16. The splice of claim 13, wherein the clamp includes an additional tapered collar.

17. The splice of claim 13, wherein the sleeve segment includes multiple ribbed inserts placed at different circumferential locations around the bar ends.

18. The splice of claim 12, wherein the clamp also includes plural bolts that pass through threaded bolt holes in the sleeve to press the ribs into the deformations.

19. The splice of claim 18, wherein the bolts include shear bolts.

20. The splice of claim 18, wherein the bolt holes are substantially longitudinally aligned.

21. The splice of claim 18, wherein the bolts are driven into the bars.

22. The splice of claim 21, wherein the bolt holes are substantially diametrically opposed to the insert, on opposite sides of the bars.

23. The splice of claim 18, wherein the bolts are driven into an insert between the fasteners and the bars.

24. The splice of claim 23, wherein the insert is a toothed insert having circumferential teeth for biting into the bars.

25. The splice of claim 18, wherein the bolts pull together generally parallel flanges of the sleeve, tightening the sleeve segment around the joined bars.

26. The splice of claim 18,

wherein the sleeve includes a pair of sleeve halves; and

wherein the bolts pass through one of the sleeve halves and into the other of the sleeve halves, thereby pulling the sleeve halves together and tightening the sleeve segment around the joined bars.

27. The splice of claim 12,

wherein the sleeve includes a pair of sleeve portions that each have axially protruding fingers; and

wherein, when the sleeve portions are forced axially toward one another, at least some of the fingers press inward when the fingers of one of the sleeve portions are interdigitated with the fingers of the other of the sleeve portions.

28. The splice of claim 1, wherein the sleeve segment is a part of a single-piece sleeve for surrounding the bar ends.

ERICP0344US

29. The splice of claim 28, wherein the clamp includes bolts that pass through threaded bolt holes in the sleeve.

30. The splice of claim 29, wherein the bolt holes are substantially diametrically opposite the ribs, on opposite sides of the bar ends.

31. A splice for deformed reinforcing bar comprising:

a sleeve segment having longitudinal ribs on an inner surface; and

means to clamp the sleeve segment against an end of the deformed bar to cause the ribs to deform to conform to and lock the deformed bar.

32. The splice of claim 31, wherein the ribs have rounded distal corners.

33. The splice of claim 31, wherein troughs between the ribs have proximal rounded corners.

34. The splice of claim 31, wherein the ribs are of substantially uniform width.

35. The splice of claim 31, wherein the ribs are enlarged at their distal ends.

36. The splice of claim 31, wherein the ribs are softer than the reinforcing bars.

37. The splice of claim 31, wherein the ribs are more malleable than the bars.

38. The splice of claim 31, wherein the ribs have a greater ductility than the bars.

39. The splice of claim 31, wherein the ribs have a radial height greater than their circumferential width.

40. The splice of claim 31, wherein the means to clamp includes means to flatten rib top portions, such that there is less space between the rib top portions than there is between rib bottom portions.

41. The splice of claim 40, wherein the means to flatten includes means to press the rib top portions circumferentially together.

42. A splice for deformed reinforcing bar comprising:

a sleeve segment having a deformable interior section weaker than the balance of the segment; and

means to press the weaker interior section against the bar to cause it to conform to and lock with the deformed bar.

43. A method of splicing reinforcing bars having deformations thereupon, the method comprising:

placing longitudinal ribs of a sleeve section against ends of the bars; and

pressing the longitudinal ribs onto the bars, causing them to conform to the bar deformations.

44. The method of claim 43, wherein the ribs are softer than the reinforcing bars.

45. The method of claim 43, wherein the ribs are more malleable than the bars.

46. The method of claim 43, wherein the ribs have a greater ductility than the bars.

47. The method of claim 43, wherein the pressing includes placing notches the ribs conforming to the deformations on the bar ends.

ERICP0344US

48. The method of claim 43, wherein the pressing includes flattening top portions of the ribs.

49. The method of claim 48, wherein the flattening includes causing the top portions of adjacent of the ribs to contact one another.

50. The method of claim 43, wherein the sleeve section is an insert within a sleeve; and wherein the placing includes inserting the bar ends into the sleeve.